

NATURAL RESOURCES CONSERVATION SERVICE CONSERVATION PRACTICE STANDARD

FIELD BORDER

(Feet)

CODE 386

DEFINITION

A strip of permanent vegetation established at the edge or around the perimeter of a field.

PURPOSES

- Reduce erosion from wind and water
- Soil and water quality protection
- Management of harmful insect populations
- Provide wildlife food and cover
- Increase carbon storage in biomass and soils
- Improve air quality

CONDITIONS WHERE PRACTICE APPLIES

At the edges of cropland fields and to connect other buffer practices within the field. May also apply to recreation land or other land uses where agronomic crops are grown.

CRITERIA

General Criteria Applicable To All Purposes

Borders will have the following lengths and widths according to the purpose of the border.

- Prevention of Wind Erosion:
 - Minimum width – 12 feet
 - Minimum length – length of field to be protected
- Prevention of Water erosion:
 - Minimum width – 12 feet
 - Minimum length - length of field to be protected

- Sediment Filtration
 - Minimum width – 12 feet
 - Minimum length - length of field to be protected
- Wildlife Habitat
 - Minimum width – 20 feet
 - Minimum length – length of field or, if planned as a travel lane, sufficient length to join two fields of permanent cover
- Weed Control
 - Minimum width – 20 feet
 - Minimum length – length of field or, if planned as a travel lane, sufficient length to join two fields of permanent cover.

Noxious weeds in the planting area will be controlled prior to planting.

Establishment: Refer to Range Planting (550) and Pasture and Hayland Planting (512) standards for seedbed preparation, fertilization, seeding, seeding rates and planting dates.

The field borders will be established to adapted species of permanent grass, legumes, and/or shrubs.

Additional Criteria To Reduce Erosion From Wind And Water

Wind Erosion Reduction

Locate borders around the entire perimeter of the field or, as a minimum, provide a stable area on the upwind edge of the field as determined by prevailing wind direction data.

Plant stiff-stemmed, upright grasses to trap wind blown soil particles.

Minimum height of grass shall be one foot during the critical erosion period.

Water Erosion Reduction

Locate borders around entire perimeter of the field or, as a minimum, install borders to eliminate sloping end rows, headlands, and other areas where concentrated water flows will enter or exit the field.

Additional Criteria To Protect Soil And Water Quality

Reducing Runoff and Increasing Infiltration

Locate borders around entire perimeter of the field or, as a minimum, install borders to eliminate sloping end rows, headlands and other areas where concentrated water flows will enter or exit the field.

Maintaining Field Setback Distances For Manure and Chemical Applications

Border widths will be designed to conform to minimum field application setback widths established by state or local regulations.

Sediment Trapping

Locate borders around the entire perimeter of the field or, as a minimum, in areas where runoff enters or leaves the field.

Reducing Soil Compaction from Equipment Parking and Traffic

Border widths will be designed to accommodate equipment parking, loading/unloading equipment, grain harvest operations, etc.

Additional Criteria For Management Of Harmful Insect Populations.

Provide a Harbor For Beneficial Insects

Include herbaceous plants that attract beneficial insects. See planning considerations for including shrubs.

Mowing, harvesting, and pesticide applications will be scheduled to accommodate life cycle requirements of the beneficial insects.

OR

Provide a Habitat to Cause Pest Insects to Congregate

Select plants for the field border that attract pest insects.

Use mechanical, cultural, and/or chemical techniques to reduce pest populations when and where they congregate in the field border.

Additional Criteria To Provide Wildlife Food And Cover

Be aware of the potential for increased rodent populations and provide control as necessary.

Plants that provide wildlife food and cover shall be used.

Mowing, harvest, and weed control activities within the field border will be scheduled to accommodate reproduction and other requirements of target wildlife species.

PLANNING CONSIDERATIONS

Field borders are more effective and provide more environmental benefits when planted around the entire field.

Field borders enhance the aesthetics and provide stability around the field edge. They also provide turn and travel areas for equipment and reduce airborne dust.

To increase trapping efficiency, consider establishing a narrow strip of stiff-stemmed upright grass at the crop/field border interface.

Field borders can be used to comply with required field setback distances applicable to manure and chemical applications.

Wildlife enhancement and other benefits of native plants should be discussed during planning.

Consider planting grasses, forbs and/or legumes that attract and provide food and cover habitat for pollinators and beneficial insects. See Idaho Biology Technical Note No. 1; Pollinators.

Native species should be used when feasible and meet producer objectives.

Consider over seeding the border with legumes for plant diversity and wildlife benefits.

Schedule mowing, harvesting, and weed control to accommodate wildlife nesting needs and other special requirements or purposes.

Waterbars or berms may be needed to breakup or redirect concentrated water flows within the borders.

If bank stabilization is a concern, select fibrous deep-rooted plants.

Consider plants tolerant to sediment deposition and chemicals planned for application.

Rows of shrubs adjacent to field borders will often enhance field borders ability to harbor beneficial insects, and may also provide additional wildlife benefits. Refer to Windbreak/Shelterbelt (380) for further information.

If installation or maintenance of the practice has potential of affecting cultural resources (archaeological, historic, historic landscape, or traditional cultural properties), follow NRCS state policy for considering cultural resources.

PLANS AND SPECIFICATIONS

Plans and specifications are to be prepared for the practice site. The following items should be specified. A job sheet is available to document these items:

- Border widths and lengths based on local design criteria
- Location within the field or farm boundary
- Vegetation to be used
- Site preparation
- Planting method
- Liming or fertilizer requirements
- Operation and maintenance requirements

OPERATION AND MAINTENANCE

Field borders require careful management and maintenance for performance and longevity.

The following will be planned and applied as needed:

- Do not clip, mow or burn dryland field border plantings unless part of a planned weed control or fire break program. Allow annual growth to accumulate for wildlife cover. Mow irrigated areas annually at the time of the second cutting of hay to allow growth of ground-nesting birds to reach flight state before cutting.
- Re-establish borders when the vigor of the stand has deteriorated to a point where weeds are a problem. Fertilization will prolong the life of the borders and maintain them in a vigorous growing condition.

- Grazing is allowable when consistent with Prescribed Grazing (528).
- Storm damage repair.
- Remove sediment deposition along edges of borders when deposition begins to impede water flow through the border.
- Shut off sprayers and raise tillage equipment to avoid damage to field borders.
- Shape and reseed border areas damaged by chemicals, tillage or equipment traffic.
- Fertilize, mow, harvest and control noxious weeds to maintain plant vigor.
- Ephemeral gullies and rills that develop in the border will be filled and reseeded.
- Avoid damage from tillage when field borders are used as turn rows at the end of fields.

REFERENCES

NRCS – Idaho Plant Materials Technical Notes

No. 4 – Reading Seed Packaging Labels and Calculating Seed Mixtures

No. 10 – Pasture and Range Seedings

No. 24 – Grass, Grass-Like, Forb, Legume and Woody Species for the Intermountain West

No. 41 – Restoration and Diversification of Plant Communities with Woody Plants

NRCS – Idaho Biology Technical Note

No. 1 – Pollinators

Land Resource Regions and Major Land Resource Areas of the United States, Issued 2006.